

**Capstone Project Report**

**Report 4 – Software Design Document**

– Hanoi, September 2022 –

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# I. Record of Changes

|  |  |  |  |
| --- | --- | --- | --- |
| Date | A\* M, D | In charge | Change Description |
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\*A - Added M - Modified D - Deleted

# II. Software Design Document

## 1. System Design

### 1.1 System Architecture

#### 1.1.1 Diagram

Diagram

Description automatically generated

#### 1.1.2 Component Explanation

##### *1.1.2.1 Spring Boot*

A picture containing logo

Description automatically generated

In the project, the team uses Spring Boot libraries to implement the backend system for this project. The project uses the startup libraries provided by Spring Boot and uses the Spring Security library to generate JWT Tokens to authenticate and authorize requests sent to the system.

##### *1.1.2.2 ReactJS*

A picture containing text

Description automatically generated

ReactJS is a JavaScript library used to create reusable person interface factors. The definition of React is as follows: React is a library for creating composable person interfaces. It promotes the development of reusable UI additives that show constantly changing statistics.

React takes away the DOM from you, resulting in a greater honest programming fashion and stepped forward velocity. React can also energy local apps with React local and also render at the server the use of Node. React makes use of one-manner reactive records flow, that's less boilerplate and easier to apprehend than traditional records binding.

##### *1.1.2.3 MySQL*

Logo, company name

Description automatically generated

My team is final student and we looking for a free or low-cost database management system, several are available from which to choose: MySQL, PostgreSQL, SQLite, one of the free-but-unsupported engines from commercial vendors, and so forth. When we compare MySQL with other database systems, think about what's most important to us. Performance, support, features (such as SQL conformance or extensions), licensing conditions and restrictions, and price all are factors to take into account. Given these considerations, MySQL has many attractive features to offer:

* **Speed**: MySQL is fast. Its developers contend that MySQL is about the fastest database system can get.
* **Ease of use:** MySQL is a high-performance but relatively simple database system and is much less complex to set up and administer than larger systems.
* **Query language support:** MySQL understands SQL, the standard language of choice for all modern database systems.
* **Capability:** The MySQL server is multi-threaded, so many clients can connect to it at the same time. Each client can use multiple databases simultaneously.

##### *1.1.2.4 Google Cloud Platform*

Icon

Description automatically generated

In the project, the team uses many typical Google Cloud platform services such as the Google Map API service to use for locating the hostel and giving directions to the hostel right on the interface of the website. In addition, the team also deploys the project on a virtual machine of Google Cloud with Ubuntu operating system and running Nginx server.

##### *1.1.2.5 Google Map API*

Logo, company name

Description automatically generated

Google Maps is a Web-based service that provides detailed information about geographical regions and sites around the world. In addition to conventional road maps, Google Maps offers aerial and satellite views of many places. In some cities, Google Maps offers street views compromising photographs taken from vehicles. It offers satellite imagery, aerial photography, street maps, 360° interactive panoramic views of streets (Street View), real-time traffic conditions

### 1.2 Package Diagram

Diagram

Description automatically generated

*Figure 1.2: Package Diagram*

***Package Descriptions***

|  |  |  |
| --- | --- | --- |
| **No** | **Package** | **Description** |
| 1 | DTO | Contains classes for the request and response, the DTO passes data from the DAO to the service and decides what data the user can see. |
| 2 | Service | Contains classes for display data to the view and, handle logic, modify, convert from model to DTO. |
| 3 | Controller | Enables the connection between server and client. |
| 4 | View | Contains the UI and UX of the website. |

## 2. Database Design

**2.1 Database Diagram**

Timeline

Description automatically generated

*Figure 2.1.1: Database Diagram*

**2.2 Table Descriptions**

**2.2.1 Sca\_form**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | code | varchar(255) |  |  |  |
| 03 | name | varchar(255) |  |  |  |
| 04 | description | varchar(255) |  |  |  |
| 05 | last\_modified\_by | varchar(255) |  |  |  |
| 06 | last\_modified\_date | datetime |  |  |  |
| 07 | created\_by | varchar(255) |  |  |  |
| 08 | created\_date | datetime |  |  |  |

**2.2.2 Sca\_question**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | question | varchar(255) |  |  |  |
| 03 | order | int |  |  |  |
| 04 | is\_required | bit(1) |  |  |  |
| 05 | last\_modified\_by | varchar(255) |  |  |  |
| 06 | last\_modified\_date | datetime |  |  |  |
| 07 | created\_by | varchar(255) |  |  |  |
| 08 | created\_date | datetime |  |  |  |
| 09 | form\_id | int | FK |  |  |

**2.2.3 Option**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | question\_id | varchar(255) | FK |  |  |
| 03 | option | varchar(1000) |  |  |  |
| 04 | order | int |  |  |  |
| 05 | last\_modified\_by | varchar(255) |  |  |  |
| 06 | last\_modified\_date | datetime |  |  |  |
| 07 | created\_by | varchar(255) |  |  |  |
| 08 | created\_date | datetime |  |  |  |

**2.2.4 Question\_answer**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | question\_id | varchar(255) | FK |  |  |
| 03 | option\_id | int | FK |  |  |
| 04 | result\_id | int | FK |  |  |
| 05 | text\_answer | varchar(1000) |  |  |  |
| 06 | last\_modified\_by | varchar(255) |  |  |  |
| 07 | last\_modified\_date | datetime |  |  |  |
| 08 | created\_by | varchar(255) |  |  |  |
| 09 | created\_date | datetime |  |  |  |

**2.2.5 Sca\_result**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | customer\_id | int | FK |  |  |
| 03 | receptionist\_id | int | FK |  |  |
| 04 | status\_id | int | FK |  |  |
| 05 | comment | varchar(1000) |  |  |  |
| 06 | last\_modified\_by | varchar(255) |  |  |  |
| 07 | last\_modified\_date | datetime |  |  |  |
| 08 | created\_by | varchar(255) |  |  |  |
| 09 | created\_date | datetime |  |  |  |

**2.2.6 Sca\_result\_service**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | result\_id | int | FK |  |  |
| 03 | service\_id | int | FK |  |  |

**2.2.7 Lookup**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | lookup\_key | varchar(255) |  |  |  |
| 03 | lookup\_val | varchar(255) |  |  |  |
| 04 | display\_val | varchar(255) |  |  |  |
| 05 | description | varchar(255) |  |  |  |
| 06 | last\_modified\_by | varchar(255) |  |  |  |
| 07 | last\_modified\_date | datetime |  |  |  |
| 08 | created\_by | varchar(255) |  |  |  |
| 09 | created\_date | datetime |  |  |  |

**2.2.8 Session**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | service\_id | varchar(255) | FK |  |  |
| 03 | spa\_course\_id | varchar(255) | FK |  |  |
| 04 | status\_id | varchar(255) | FK |  |  |
| 05 | expected\_start\_date | varchar(255) |  |  |  |
| 06 | order | int |  |  |  |
| 07 | last\_modified\_by | varchar(255) |  |  |  |
| 08 | last\_modified\_date | datetime |  |  |  |
| 09 | created\_by | varchar(255) |  |  |  |
| 10 | created\_date | datetime |  |  |  |

**2.2.9 Spa\_course**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | service\_id | int | FK |  |  |
| 03 | spa\_course\_id | int | FK |  |  |
| 04 | status\_id | int | FK |  |  |
| 05 | start\_time | int |  |  |  |
| 06 | end\_time | int |  |  |  |
| 07 | cancelled\_time | datetime |  |  |  |
| 08 | cancelled\_by | varchar(255) |  |  |  |
| 09 | last\_modified\_by | varchar(255) |  |  |  |
| 10 | last\_modified\_date | datetime |  |  |  |
| 11 | created\_by | varchar(255) |  |  |  |
| 12 | created\_date | datetime |  |  |  |

**2.2.10 Branch**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | service\_id | int | FK |  |  |
| 03 | spa\_course\_id | int | FK |  |  |
| 04 | status\_id | int | FK |  |  |
| 05 | name | varchar(255) |  |  |  |
| 06 | code | varchar(255) |  |  |  |
| 07 | detail\_address | varchar(500) |  |  |  |
| 08 | hotline | varchar(50) |  | x |  |
| 09 | latitude | varchar(255) |  | x |  |
| 10 | longitude | varchar(255) |  | x |  |
| 11 | last\_modified\_by | varchar(255) |  |  |  |
| 12 | last\_modified\_date | datetime |  |  |  |
| 13 | created\_by | varchar(255) |  |  |  |
| 14 | created\_date | datetime |  |  |  |

**2.2.11 Config\_data**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | branch\_id | int | FK |  |  |
| 03 | config\_key | varchar(255) | FK |  |  |
| 04 | config\_value | varchar(255) | FK |  |  |
| 05 | description | varchar(255) |  |  |  |
| 06 | last\_modified\_by | varchar(255) |  |  |  |
| 07 | last\_modified\_date | datetime |  |  |  |
| 08 | created\_by | varchar(255) |  |  |  |
| 09 | created\_date | datetime |  |  |  |

**2.2.12 Branch\_service**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | branch\_id | int | FK |  |  |
| 03 | service\_id | int | FK |  |  |

**2.2.13 Service**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | category\_id | int | FK |  |  |
| 03 | equipment\_id | int | FK |  |  |
| 04 | name | varchar(255) |  |  |  |
| 05 | code | varchar(255) |  |  |  |
| 06 | description | varchar(255) |  |  |  |
| 07 | duration | int |  |  |  |
| 08 | is\_active | boolean |  |  |  |
| 09 | last\_modified\_by | varchar(255) |  |  |  |
| 10 | last\_modified\_date | datetime |  |  |  |
| 11 | created\_by | varchar(255) |  |  |  |
| 12 | created\_date | datetime |  |  |  |

**2.2.14 Price**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | service\_id | int | FK |  |  |
| 03 | price | float |  |  |  |
| 04 | start\_date | datetime |  |  |  |
| 05 | end\_date | datetime |  |  |  |
| 06 | last\_modified\_by | varchar(255) |  |  |  |
| 07 | last\_modified\_date | datetime |  |  |  |
| 08 | created\_by | varchar(255) |  |  |  |
| 09 | created\_date | datetime |  |  |  |

**2.2.15 Service\_category**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | name | varchar(255) |  |  |  |
| 03 | code | varchar(255) |  |  |  |
| 04 | description | varchar(255) |  |  |  |
| 06 | last\_modified\_by | varchar(255) |  |  |  |
| 07 | last\_modified\_date | datetime |  |  |  |
| 08 | created\_by | varchar(255) |  |  |  |
| 09 | created\_date | datetime |  |  |  |

**2.2.16 Equipment\_type**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | name | varchar(255) |  |  |  |
| 03 | code | varchar(255) |  |  | UNIQUE |
| 04 | description | varchar(255) |  |  |  |
| 05 | last\_modified\_by | varchar(255) |  |  |  |
| 06 | last\_modified\_date | datetime |  |  |  |
| 07 | created\_by | varchar(255) |  |  |  |
| 08 | created\_date | datetime |  |  |  |

**2.2.17 Equipment\_branch**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | equipment\_code | varchar(255) | FK |  |  |
| 03 | branch\_id | int | FK |  |  |
| 04 | quantity | int |  |  |  |
| 05 | last\_modified\_by | varchar(255) |  |  |  |
| 06 | last\_modified\_date | datetime |  |  |  |
| 07 | created\_by | varchar(255) |  |  |  |
| 08 | created\_date | datetime |  |  |  |

**2.2.18 Retriction**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | user\_id | int | FK |  |  |
| 03 | branch\_id | int | FK |  |  |
| 04 | role\_id | int | FK |  |  |
| 05 | last\_modified\_by | varchar(255) |  |  |  |
| 06 | last\_modified\_date | datetime |  |  |  |
| 07 | created\_by | varchar(255) |  |  |  |
| 08 | created\_date | datetime |  |  |  |

**2.2.19 Role**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | user\_id | int | FK |  |  |
| 03 | branch\_id | int | FK |  |  |
| 04 | role\_id | int | FK |  |  |
| 05 | name | varchar(255) |  |  |  |
| 06 | code | varchar(255) |  |  |  |
| 07 | description | varchar(255) |  |  |  |
| 08 | is\_active | boolean |  |  |  |
| 09 | last\_modified\_by | varchar(255) |  |  |  |
| 10 | last\_modified\_date | datetime |  |  |  |
| 11 | created\_by | varchar(255) |  |  |  |
| 12 | created\_date | datetime |  |  |  |

**2.2.20 Permission\_role**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | role\_id | int | FK |  |  |
| 03 | permission\_id | int | FK |  |  |

**2.2.21 Permission**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | name | varchar(255) |  |  |  |
| 03 | code | varchar(255) |  |  |  |
| 04 | description | varchar(255) |  |  |  |
| 05 | last\_modified\_by | varchar(255) |  |  |  |
| 06 | last\_modified\_date | datetime |  |  |  |
| 07 | created\_by | varchar(255) |  |  |  |
| 08 | created\_date | datetime |  |  |  |

**2.2.22 Notification**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | message | varchar(1000) | FK |  |  |
| 03 | deep\_link | varchar(1000) | FK |  |  |
| 04 | is\_seen | bit(1) | FK |  |  |
| 05 | last\_modified\_by | varchar(255) |  |  |  |
| 06 | last\_modified\_date | datetime |  |  |  |
| 07 | created\_by | varchar(255) |  |  |  |
| 08 | created\_date | datetime |  |  |  |

**2.2.23 Notification\_user**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | notification\_id | int | FK |  |  |
| 03 | user\_id | int | FK |  |  |

**2.2.24 User**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | full\_name | varchar(255) |  |  |  |
| 03 | phone\_number | varchar(50) |  |  | UNIQUE |
| 04 | email | varchar(255) |  |  |  |
| 05 | username | varchar(255) |  |  | UNIQUE |
| 06 | dob | datetime |  |  |  |
| 07 | gender | varchar(255) |  |  |  |
| 08 | password | varchar(50) |  |  |  |
| 09 | is\_active | bit(1) |  |  |  |
| 10 | last\_modified\_by | varchar(255) |  |  |  |
| 11 | last\_modified\_date | datetime |  |  |  |
| 12 | created\_by | varchar(255) |  |  |  |
| 13 | created\_date | datetime |  |  |  |

**2.2.25 Apointment\_master**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | customer\_id | int | FK |  |  |
| 03 | branch\_id | int | FK |  |  |
| 04 | status\_id | int | FK |  |  |
| 05 | session\_id | int | FK |  |  |
| 06 | expected\_start\_time | datetime |  |  |  |
| 07 | expected\_end\_time | datetime |  |  |  |
| 08 | actual\_start\_time | datetime |  |  |  |
| 09 | actual\_end\_time | datetime |  |  |  |
| 10 | cancel\_time | datetime |  |  |  |
| 11 | total | float |  |  |  |
| 12 | pay\_amount | float |  |  |  |
| 13 | last\_modified\_by | varchar(255) |  |  |  |
| 14 | last\_modified\_date | datetime |  |  |  |
| 15 | created\_by | varchar(255) |  |  |  |
| 16 | created\_date | datetime |  |  |  |

**2.2.26 Apointment\_service**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | appointment\_master\_id | int | FK |  |  |
| 03 | service\_id | int | FK |  |  |
| 04 | status\_id | int | FK |  |  |  |
| 05 | expected\_start\_time | datetime |  |  |  |  |
| 06 | expected\_end\_time | datetime |  |  |  |  |
| 07 | cancel\_time | datetime |  |  |  |  |
| 08 | total | float |  |  |  |  |
| 09 | pay\_amount | float |  |  |  |  |
| 10 | cancelled\_by | varchar(255) |  |  |  |  |
| 11 | last\_modified\_by | varchar(255) |  |  |  |  |
| 12 | last\_modified\_date | datetime |  |  |  |  |
| 13 | created\_by | varchar(255) |  |  |  |  |
| 14 | created\_date | datetime |  |  |  |  |

**2.2.27 Apointment\_service\_specialist**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | specialist\_id | int | FK |  |  |
| 03 | appointment\_service\_id | int | FK |  |  |
| 04 | start\_time | datetime |  |  |  |
| 05 | end\_time | datetime |  |  |  |
| 06 | last\_modified\_by | varchar(255) |  |  |  |
| 07 | last\_modified\_date | datetime |  |  |  |
| 08 | created\_by | varchar(255) |  |  |  |
| 09 | created\_date | datetime |  |  |  |

**2.2.28 Voucher\_usage**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | user\_id | int | FK |  |  |
| 03 | voucher\_id | int | FK |  |  |
| 04 | appointment\_service\_id | int | FK |  |  |

**2.2.29 Voucher**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | specialist\_id | int | FK |  |  |
| 03 | appointment\_service\_id | int | FK |  |  |
| 04 | code | varchar(255) |  |  |  |
| 05 | name | varchar(255) |  |  |  |
| 06 | description | varchar(255) |  |  |  |
| 07 | type | varchar(255) |  |  |  |
| 08 | value | double |  |  |  |
| 09 | start\_time | datetime |  |  |  |
| 10 | end\_time | datetime |  |  |  |
| 11 | quantity | int |  |  |  |
| 12 | max\_qty\_per\_user | int |  |  |  |
| 13 | min\_order\_value | int |  |  |  |
| 14 | max\_value\_discount | int |  |  |  |
| 15 | last\_modified\_by | varchar(255) |  |  |  |
| 16 | last\_modified\_date | datetime |  |  |  |
| 17 | created\_by | varchar(255) |  |  |  |
| 18 | created\_date | datetime |  |  |  |

**2.2.30 Reason\_mapping**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | reason\_id | int | FK |  |  |
| 03 | code | varchar(255) |  |  |  |
| 04 | ref\_type | varchar(255) |  |  |  |
| 05 | action\_type | varchar(255) |  |  |  |
| 06 | reason\_note | varchar(255) |  |  |  |
| 07 | last\_modified\_by | varchar(255) |  |  |  |
| 08 | last\_modified\_date | datetime |  |  |  |
| 09 | created\_by | varchar(255) |  |  |  |
| 10 | created\_date | datetime |  |  |  |

**2.2.31 Reason\_message**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | reason\_message\_type\_id | int | FK |  |  |
| 03 | code | varchar(255) |  |  |  |
| 04 | name | varchar(255) |  |  |  |
| 05 | description | varchar(255) |  |  |  |
| 06 | is\_active | bit(1) |  |  |  |
| 07 | required\_note | bit(1) |  |  |  |
| 08 | last\_modified\_by | varchar(255) |  |  |  |
| 09 | last\_modified\_date | datetime |  |  |  |
| 10 | created\_by | varchar(255) |  |  |  |
| 11 | created\_date | datetime |  |  |  |

**2.2.32 Post**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | title | varchar(255) |  |  |  |
| 03 | description | varchar(1000) |  |  |  |
| 04 | last\_modified\_by | varchar(255) |  |  |  |
| 05 | last\_modified\_date | datetime |  |  |  |
| 06 | created\_by | varchar(255) |  |  |  |
| 07 | created\_date | datetime |  |  |  |

**2.2.33 File**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | metadata | varchar(1000) |  |  |  |
| 03 | type | varchar(1000) |  |  |  |
| 04 | storage\_source | varchar(255) |  |  |  |
| 05 | upload\_status | varchar(255) |  |  |  |
| 06 | fail\_reason | varchar(255) |  |  |  |
| 07 | start\_upload\_time | datetime |  |  |  |
| 08 | finish\_upload\_time | datetime |  |  |  |
| 09 | url | varchar(1000) |  |  |  |
| 10 | last\_modified\_by | varchar(255) |  |  |  |
| 11 | last\_modified\_date | datetime |  |  |  |
| 12 | created\_by | varchar(255) |  |  |  |
| 13 | created\_date | datetime |  |  |  |

**2.2.34 Feedback**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | point | int |  |  |  |
| 03 | title | varchar(255) |  |  |  |
| 04 | description | varchar(1000) |  |  |  |
| 05 | ref\_id | int |  |  |  |
| 06 | ref\_type | varchar(255) |  |  |  |
| 07 | last\_modified\_by | varchar(255) |  |  |  |
| 08 | last\_modified\_date | datetime |  |  |  |
| 09 | created\_by | varchar(255) |  |  |  |
| 10 | created\_date | datetime |  |  |  |

**2.2.35 Apointment\_tracking**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | time | datetime |  |  |  |
| 03 | max\_qty | int |  |  |  |
| 04 | booked\_qty | int |  |  |  |
| 05 | is\_available | bit(1) |  |  |  |
| 06 | last\_modified\_by | varchar(255) |  |  |  |
| 07 | last\_modified\_date | datetime |  |  |  |
| 08 | created\_by | varchar(255) |  |  |  |
| 09 | created\_date | datetime |  |  |  |

**2.2.36 Job\_execution\_params**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **PK/FK** | **Not null** | **Notes** |
| 01 | id | int | PK | x |  |
| 02 | param\_key | varchar(255) |  |  |  |
| 03 | param\_value | varchar(255) |  |  |  |
| 04 | last\_modified\_by | varchar(255) |  |  |  |
| 05 | last\_modified\_date | datetime |  |  |  |
| 06 | created\_by | varchar(255) |  |  |  |
| 07 | created\_date | datetime |  |  |  |

## 3. Detailed Design

### 3.1 Manage Category

#### 3.1.1 Class Diagram

Diagram

Description automatically generated

*Figure 3.1.1: Category’s Class Diagram*

***3.1.2 Sequence Diagram***

- View category list

Diagram

Description automatically generated

- Create category

Diagram, timeline

Description automatically generated

- Update category

Diagram, timeline

Description automatically generated

- Delete category

Diagram, timeline

Description automatically generated

### 3.2 Manage Post

***3.2.1 Class Diagram***

***3.2.2 Sequence Diagram***

- View post list

Diagram

Description automatically generated

- View post detail

Diagram

Description automatically generated

- Create post

Diagram, timeline

Description automatically generated

- Update post

Diagram, timeline

Description automatically generated

- Delete post

Diagram, timeline

Description automatically generated

### 3.3 Manage Service

***3.3.1 Class Diagram***

***Diagram

Description automatically generated***

***3.3.2 Sequence Diagram***

- View service list

Diagram

Description automatically generated

- View service detail

Diagram

Description automatically generated

- Create service

Diagram, timeline

Description automatically generated

- Update service

Diagram, timeline

Description automatically generated

- Delete service

Diagram, timeline

Description automatically generated

### 3.4 Manage Branch

***3.4.1 Class Diagram***

***Table

Description automatically generated with medium confidence***

*Figure 3.4.1: Branch’s Class Diagram*

***3.4.2 Sequence Diagram***

- View branch list

Diagram

Description automatically generated

- Create branch

Diagram, timeline

Description automatically generated

- Update branch

Diagram, timeline

Description automatically generated

- Delete branch

Diagram, timeline

Description automatically generated

### 3.5 Manage Data Config

***3.5.1 Class Diagram***

***Text

Description automatically generated with low confidence***

*Figure 3.5.1: Data config’s Class Diagram*

***3.5.2 Sequence Diagram***

- View data config list

Diagram

Description automatically generated

- Create data config

Diagram, timeline

Description automatically generated

- Update data config

Diagram, timeline

Description automatically generated

- Delete data config

Diagram

Description automatically generated

### 3.6 Manage Course

***3.6.1 Class Diagram***

***3.6.2 Sequence Diagram***

- View course list

Diagram

Description automatically generated

- View course detail

Diagram

Description automatically generated

- Create course

Diagram, timeline

Description automatically generated

- Update course

Diagram, timeline

Description automatically generated

- Delete course

Diagram, timeline

Description automatically generated

### 3.7 Manage Device

***3.7.1 Class Diagram***

***A picture containing text

Description automatically generated***

*Figure 3.7.1: Device’s Class Diagram*

***3.7.2 Sequence Diagram***

- View device list

Diagram

Description automatically generated

- Create device

Diagram

Description automatically generated

- Update device

Diagram

Description automatically generated

- Delete device

Diagram

Description automatically generated

### 3.8 Manage Appointment

***3.8.1 Class Diagram***

A picture containing table

Description automatically generated

*Figure 3.8.1: Appointment’s Class Diagram*

***3.8.2 Sequence Diagram***

- View appointment list

Diagram

Description automatically generated

- View appointment detail

Diagram

Description automatically generated

- Create appointment

Diagram, timeline

Description automatically generated

- Update appointment

Diagram, timeline

Description automatically generated

- Delete appointment

Diagram

Description automatically generated

### 3.9 Manage Voucher

***3.9.1 Class Diagram***

***3.9.2 Sequence Diagram***

- View voucher list

Diagram

Description automatically generated

- Create voucher

Diagram, timeline

Description automatically generated

- Update voucher

Diagram, timeline

Description automatically generated

- Delete voucher

Diagram, timeline

Description automatically generated

### 3.10 Manage SCA Form

***3.10.1 Class Diagram***

***Diagram

Description automatically generated***

***3.10.2 Sequence Diagram***

- View form list

Diagram

Description automatically generated

- View form detail

Diagram

Description automatically generated

- Create form

Diagram, timeline

Description automatically generated

- Update form

Diagram, timeline

Description automatically generated

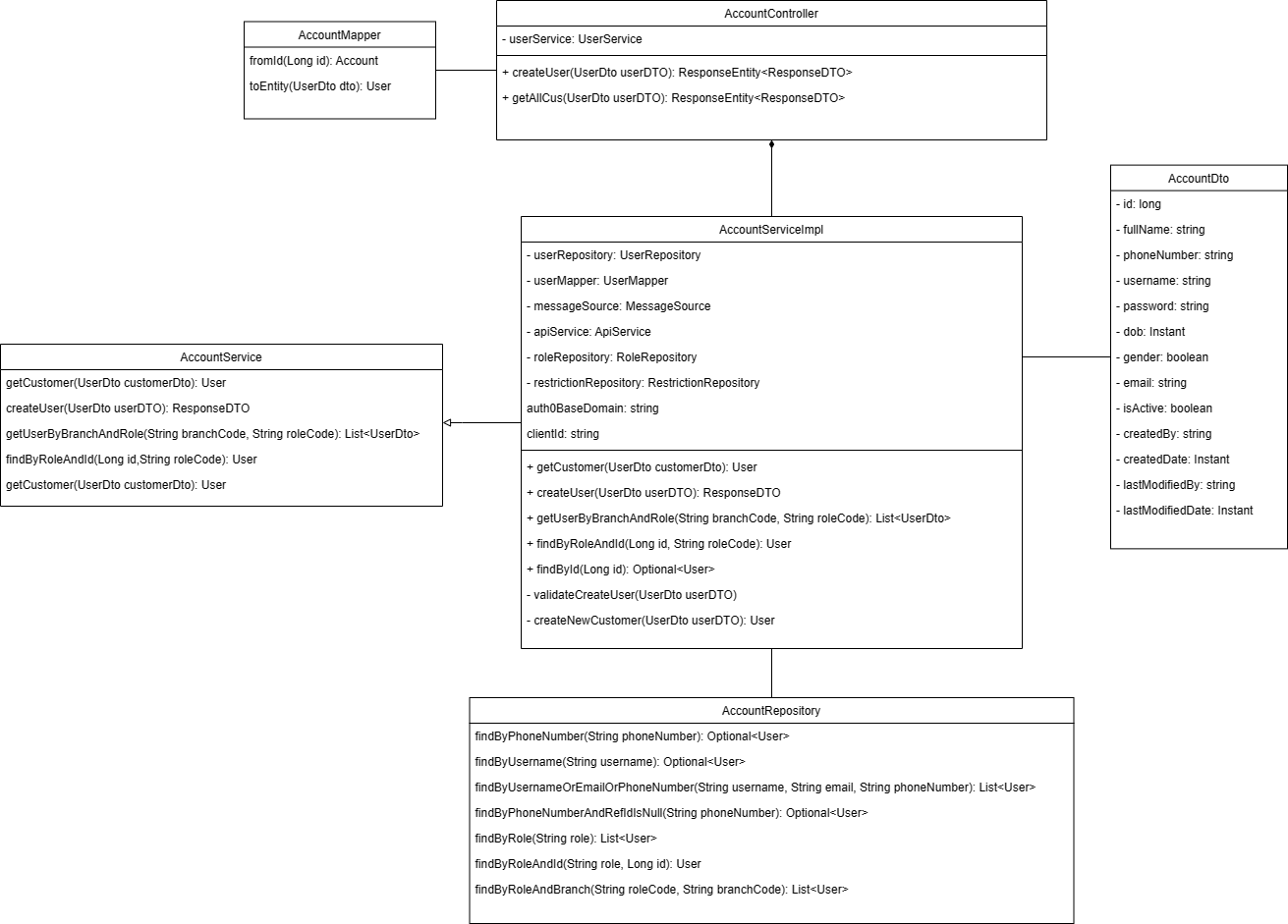
- Delete form

Diagram

Description automatically generated

### 3.11 Manage Account

***3.11.1 Class Diagram***

******

***3.11.2 Sequence Diagram***

- View account list

Diagram

Description automatically generated

- Create account

Diagram, timeline

Description automatically generated

- Update account

Diagram, timeline

Description automatically generated

- Delete account

Diagram, timeline

Description automatically generated

### 3.12 Manage Notification

***3.12.1 Class Diagram***

***3.12.2 Sequence Diagram***

- View notification list

Diagram

Description automatically generated

### 3.13 Manage Profile

***3.13.1 Class Diagram***

***3.13.2 Sequence Diagram***

### 3.14 Authentication

***3.14.1 Class Diagram***

***3.14.2 Sequence Diagram***

### 3.15 Administrator

***3.15.1 Class Diagram***

***Table

Description automatically generated***

***3.15.2 Sequence Diagram***

- View dashboard

Diagram

Description automatically generated

- Export data

Diagram, timeline

Description automatically generated